202306UECM3463OE1a

Start again

Review of preview

Started on	Monday, 10 July 2023, 12:13 PM
Completed on	Monday, 10 July 2023, 12:13 PM
Time taken	13 secs
Grade	**0** out of a maximum of 10 (**0**%)

1
Marks: 1

A random variable has a mean of 8 and coefficient of variation of 2. The third raw moment is 1460. Determine the skewness. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: -1.268555
Marks for this submission: 0/1.

2
Marks: 1

Claim severity has the following distribution:

Claim Size	250.0	262.5	275.0	287.5	300.0
Probability	0.47	0.29	0.09	0.07	0.08

Determine the distribution's Skewness. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 1.200961
Marks for this submission: 0/1.

3
Marks: 1

Claim sizes expressed in Ringgit Malaysia(RM) follow a pareto distribution with parameters $\alpha = 2$ and $\theta = 2{,}350$. A euro is worth 4.8 RM. Calculate the probability that a claim will be worth 2475.0 euros or more. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.027273
Marks for this submission: 0/1.

4
Marks: 1

An insurance loss is being modeled as a continuous two-spliced distribution as follows:
$f_X(x)$
$= c_1 e^{-x/300}$, $0 < x < 300$
$= c_2 e^{-x/4800}$, $x \geq 300$
Calculate the average loss. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 4611.495023
Marks for this submission: 0/1.

5
Marks: 1

For insurance coverage, you are given that claim size, X, follows a gamma distribution with parameters α = 3, θ = 960. Determine V(X∧ 2,000). _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 173961.8
Marks for this submission: 0/1.

6
Marks: 1

X is a random variable representing loss size.
You are given that $E[X \wedge d] = 445.5 - 297^3/2d^2$.
Loss sizes are affected by 13% inflation. Determine the average payment per loss under a policy with 342 ordinary deductible after inflation. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 161.59817
Marks for this submission: 0/1.

7
Marks: 1

You are given the following:

- Losses follow a Weibull distribution with parameters θ = 26 and τ = 2.
- The insurance coverage has an ordinary deductible of 12.

If the insurer makes a payment, what is the probability that an insurer's payment is less than or equal to 33. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.938119
Marks for this submission: 0/1.

8
Marks: 1

The distribution of X is specified by it's hazard rate function

$$h(x) = xe^{-0.5x} / \int_x^{\infty} s\, e^{-0.5s}\, ds,\ x > 0$$

Calculate $E(X-5)_+$. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.7388
Marks for this submission: 0/1.

9
Marks: 1

Suppose X ~ N(μ = 60, σ^2 = 144), calculate $E[(X-36)_+]$. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 24.1
Marks for this submission: 0/1.

10
Marks: 1

A loss, *X*, follows a Pareto distribution with α = 8 and unspecified parameter θ. You are given:

E[X - 940|X > 940] = 2E[X-115|X > 115].

Calculate E[X - 2,480|X > 2,480]. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 455.714286
Marks for this submission: 0/1.